Closing Report

IEEE P802.3bq 40GBASE-T Task Force

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Beijing, China
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P802.3bq Organization

- David Chalupsky, Chair
- Bill Woodruff, Vice Chair
- George Zimmerman, Secretary
- Channel Modeling ad hoc
  - Pete Cibula and Brad Booth, co-Chairs
- PHY Proposal ad hoc
  - George Zimmerman, Chair

Reflector and Web

- Currently ~~205~~ 208 subscribers
- To subscribe to the 802.3bq reflector, send an email to:

  ListServ@ieee.org

  with the following in the body of the message (do not include "<>"):

  subscribe stds-802-3-NGBASET <yourfirstname> <yourlastname>
  end

- Send 802.3bq reflector messages to:

  STDS-802-3-NGBASET@*listserv.ieee.org*

- Task Force web page URL:

  http://www.ieee802.org/3/bq/index.html

Task Force Private Area

- URL: http://www.ieee802.org/3/bq/private/index.html
- Username: xxxxxx
  - Password: xxxxxxxx

- Write it down…

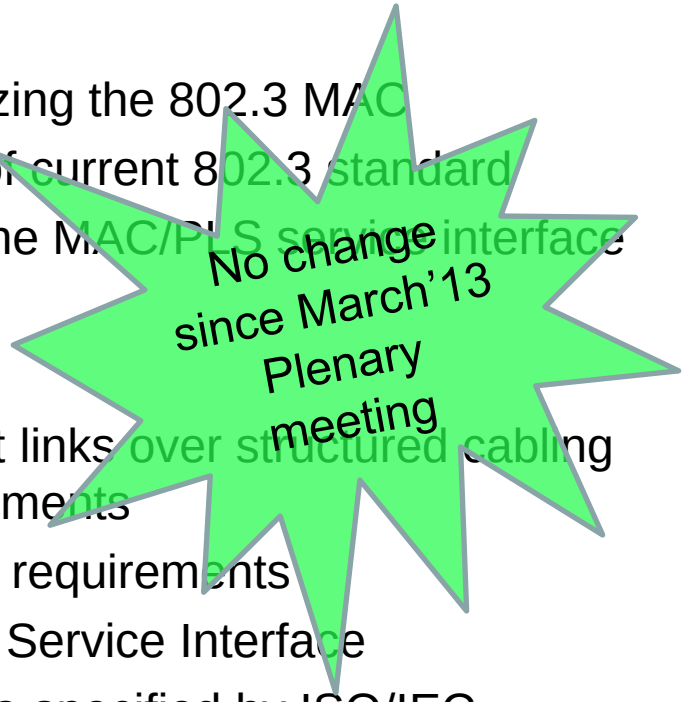
- Note – A draft, and any other content, is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights.

IEEE P802.3bq 40GBASE-T Task Force Approved Project Documents

- PAR
  - http://www.ieee802.org/3/bq/P802.3bq.pdf
- 5 Criteria
  - http://www.ieee802.org/3/bq/5Criteria.pdf
- Objectives
  - http://www.ieee802.org/3/bq/Objectives.pdf

IEEE P802.3bq 40GBASE-T Objectives

- Support full duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum Frame Size of current 802.3 standard
- Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface
- Support Auto-Negotiation (Clause 28)
- Support Energy Efficient Ethernet (Clause 78)
- Support local area networks using point-to-point links over structured cabling topologies, including directly connected link segments
- Do not preclude meeting FCC and CISPR EMC requirements
- Support a data rate of 40 Gb/s at the MAC/PLS Service Interface
- Define a link segment based upon copper media specified by ISO/IEC JTC1/SC25/WG3 and TIA TR42.7 meeting the following characteristics:
  - 4-pair, balanced twisted-pair copper cabling
  - up to 2 connectors
  - up to at least 30 m
- Define a single 40 Gb/s PHY supporting operation on the link segment



Activities this Week

- One-day meeting
  - 25 attendees signed the book
- Heard 10 presentations
- Forward progress on PHY Baseline
  - Based upon 10GBASE-T @4x baud rate with areas of refinement identified
  - Closing the refinements and open areas identified in barrass_3bq_01_0713.pdf (EEE, layering) to be done before baseline complete
- 2 technical motions passed

802.3bq Task Force Motion #3

- Move to adopt the proposal on page 6 of zimmerman_3bqah_1213.pdf, based on a 4X rate scaling of Clause 55 signaling, as a baseline PHY specification with future consideration of the proposed modifications listed on the same slide.

- M: George Zimmerman
- S: Peter Wu
- Y: 18 N:0 A:1
- (PASS) (Technical >=75%)

- Slide 6 of zimmerman_3bqah_1213.pdf

Baseline Proposal

- Baseline PHY proposal:
  - Use PCS, Framing and Line Coding from Clause 55
  - Increase symbol rate 4X to 3200 Mbaud
  - Drop transmit power to ~ 0 dBm at MDI
- Areas for improvement/consideration:
  - Backchannel for THP dynamic update?
  - Revised FEC to cover uncoded bits?
    - Multiple ways of doing this
  - Faster startup?
  - Negotiated patch-cord operational mode?
  - Remove PBO?

802.3bq Task Force Motion #4

- Move to adopt a power back off scheme in 40GBASE-T with no more than 3 steps, 0 dB, 6dB and 12 dB back off from nominal 0dBm at the MDI. Consideration of whether support for the 12 dB step is mandatory is for further study.

- M: Peter Wu
- S: George Zimmerman
- Y:15 N:0 A:3
- (PASS) (Technical >=75%)

Future Work

- Channel modeling ad hoc to provide system background noise data to PHY Proposal ad hoc.
  - Next ad hoc meeting Tuesday, April 8th, 2014
  - Are held (generally) every other Tuesday at 8:00AM PDT
  - Meeting weeks are scheduled to alternate with the P803.3bq PHY Baseline Proposal ad hoc
- PHY baseline proposal ad hoc continues work on refining baseline
  - Next ad hoc meeting: Thursday April 3, 10AM PDT
  - General time slot is 10AM Thursdays, due to conflicts
- 802.3bq meeting at next interim, May 12-13, 2014
  - Monday & Tuesday

Thank You!